

WHAT IS CLAIMED IS:

1. A magnetic head comprising a core block having a medium sliding surface formed on one surface of the core block, the medium sliding surface having a slender convex curved shape formed along a sliding direction of a recording medium from the upstream side of the sliding direction to the downstream side, and the medium sliding surface having a magnetic gap formed thereon,  
10        wherein the medium sliding surface is shaped along a longitudinal direction thereof like a circular arc with a radius of curvature  $R$  while being shaped along a width direction like a circular arc with a radius of curvature  $r$ , which is smaller than the radius of curvature  $R$ , so that the  
15        radius of curvature  $r$  is continuously reduced with closer distance to the downstream end of the recording medium sliding direction from a vicinity of the magnetic gap.
2. A magnetic head according to Claim 1, wherein the  
20        radius of curvature  $r$  of the medium sliding surface is continuously reduced with closer distance to the upstream end of the recording medium sliding direction from a vicinity of the magnetic gap.
- 25        3. A magnetic head according to Claim 2, wherein if it is defined that the radius of curvature  $r$  in the vicinity of the magnetic gap is  $r_1$ ; the radius of curvature  $r$  of at least one of the downstream end and the upstream end of the

recording medium sliding direction is  $r_2$ ; and  $\Delta r = r_1 - r_2$ , the  $\Delta r$  ranges from 0.1 mm through 0.5 mm.

4. A magnetic head according to Claim 1, wherein a cut-  
5 out is provided at a position adjacent to the downstream end of the medium sliding surface so that the width of the medium sliding surface is continuously reduced with closer distance to the downstream end.

10 5. A magnetic head according to Claim 2, wherein a cut-out is provided at a position adjacent to the downstream end of the medium sliding surface so that the width of the medium sliding surface is continuously reduced with closer distance to the downstream end.

15 6. A magnetic head according to Claim 1, wherein a cut-out is provided at a position adjacent to the upstream end of the medium sliding surface so that the width of the medium sliding surface is continuously reduced with closer distance  
20 to the upstream end.

7. A magnetic head according to Claim 2, wherein a cut-  
out is provided at a position adjacent to the upstream end of the medium sliding surface so that the width of the medium  
25 sliding surface is continuously reduced with closer distance to the upstream end.

8. A magnetic head according to Claim 5, wherein a cut-

out is provided at a position adjacent to the upstream end of the medium sliding surface so that the width of the medium sliding surface is continuously reduced with closer distance to the upstream end.

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9. A recording and reproducing apparatus comprising:

a tape loading route, in which a tape-like recording medium derived from a tape reel is wound about a rotary drum; and

10 a magnetic head according to Claim 1 disposed in the rotary drum.

10. An apparatus according to Claim 9, wherein the tape loading route comprises:

15 the rotary drum to be driven and rotated;

guide posts respectively disposed on the upstream side and the downstream side of the rotary drum for guiding a tape-like recording medium derived from the tape reel so as to wind it around the rotary drum; and

20 a capstan disposed on the downstream side of the rotary drum for allowing the recording medium to travel.

11. A recording and reproducing apparatus comprising:

a tape loading route, in which a tape-like recording medium derived from a tape reel is wound about a rotary drum; and

25 a magnetic head according to Claim 2 disposed in the rotary drum.

12. An apparatus according to Claim 11, wherein the tape loading route comprises:

the rotary drum to be driven and rotated;

5        guide posts respectively disposed on the upstream side and the downstream side of the rotary drum for guiding a tape-like recording medium derived from the tape reel so as to wind it around the rotary drum; and

         a capstan disposed on the downstream side of the rotary  
10 drum for allowing the recording medium to travel.